VPDES PERMIT FACT SHEET

This document gives pertinent information concerning the reissuance of the VPDES permit listed below. This permit is being processed as a Minor**,** Industrial permit. The effluent limitations contained in this permit will maintain the Water Quality Standards in 9VAC25-260. The discharge results from the operation of a potable water treatment facility. Under normal operating procedures the facility is linked to the municipal sewer and effluent is transferred to Proctors Creek WWTP; this permit is maintained for extraordinary circumstances during which a discharge to Swift Creek is unavoidable. This permit action consists of updating special conditions.

1. Facility Name and Address: SIC Code: 4941
   Addison-Evans Water Production and Laboratory
   Utilities Department
   P.O. Box 608
   Chesterfield, VA 23832

   Location: 13400 Hull Street Road
   Chesterfield County

2. Permit No. VA0006254

   Existing Permit Expiration Date: April 4, 2016

3. Owner Contact: Name: David Sirois, Chesterfield County Utilities Department
   Title: Plant Manager
   Telephone No: (804) 318-8140

4. Application Complete Date: July 9, 2015
   Permit Drafted By: Brian Wrenn Date: January 20, 2016
   DEQ Regional Office: Piedmont Regional Office
   Reviewed By: Adam Eller Date: January 28, 2016
   Emilee Adamson Date: February 18, 2016
   Public Comment Period Dates: March 23, 2016 to April 25, 2016

5. Receiving Stream Name: Swift Creek
   River Mile: 2DSFT030.73
   Basin: Appomattox River
   Subbasin: NA
   Section: 5d
   Class: III
   Special Standards: None

   7-Day, 10-Year Low Flow: 0.0 MGD 1-Day, 10-Year Low Flow: 0.0 MGD

   30-Day, 5-Year Low Flow: 0.0 MGD Harmonic Mean Flow: 0.0 MGD

   30-Day, 10-Year Low Flow 0.0 MGD

   Tidal? NO On 303(d) list? YES

   Attachment A: Flow Frequency Analysis

6. Operator License Requirements: None

7. Reliability Class: N/A

8. Permit Characterization:
   ( ) Private ( ) Federal ( ) State (X) Publicly Owned
   ( ) Possible Interstate Effect (X) Existing (X) Industrial SIC: 4941

   ( ) Interim Limits in Other Document (attach to Fact Sheet)

9. Discharge Description:

OUTFALL NUMBER	DISCHARGE SOURCE	TREATMENT	FLOW
001	Water Treatment Plant-settling basin sludge and washwater, and filter backwash.	Three-cell sludge lagoon	0.50 MGD (Monthly Average)

Sediment not associated with domestic wastewater is generated in the water purification process and settles out in the settling basin. Settling basin sludge and filter backwash are discharged into the sludge lagoon. Wastewater and sludge is mixed in the lagoon and pumped to the sanitary sewer for treatment at Proctors Creek WWTP (VA0024996). Therefore, under normal operating procedures a discharge is not associated with this facility. The permit is maintained for extraordinary circumstances when discharge to the municipal system is prevented. An example of this scenario would be during a hurricane or other natural disaster where Proctors Creek WWTP has lost power or is otherwise unable to receive influent from the Addison-Evans facility. No discharge occurred in the five-year cycle of the 2006 permit.

Note: The 2000 permit was issued for an average flow of 0.5 MGD. During the 2006 reissuance the county determined that 0.3 MGD was a more accurate figure for a potential discharge and the permit was issued accordingly. This was based on the assumption that if required to discharge to Swift Creek the facility would hold production to a minimum. However, increased demands on Chesterfield County Public Water Supply in recent years may not allow plant production to be reduced if a discharge to Swift Creek is unavoidable. An average effluent flow of 0.5 MGD is considered by the County as a more appropriate figure if a discharge into Swift Creek was to occur and was reflected in their 2011 permit. This flow is carried forward in the 2016 permit.

See Attachment B: Site Visit Report

Attachment C: Plant Flow Diagram

10. Sewage Sludge Use or Disposal:
The wastewater treatment process at this facility does not generate sewage sludge. Sediment not associated with domestic wastewater is generated in the water purification process, is settled out in the settling basin, and is pumped to the sludge lagoon. Most of the solids are mixed with filter backwash water and pumped to Proctors Creek WWTP. However, the solids in the lagoon do build up over time, and infrequent lagoon clean outs are necessary. Prior clean out operations have involved pump and haul operations with land application for final disposal. The procedures are addressed in the O&M Manual, but because the frequency is so low (approximately once every 20 years) a defined disposal process is not identified. See **Attachment E**.

11. Discharge(s) Location Description: The outfall is positioned to discharge to a dry ditch which converges with Swift Creek directly below the Swift Creek Reservoir dam. (Discharge will occur only in extraordinary circumstances).

See **Attachment D**- Hallsboro Topographic Map (USGS Quadrangle 100B)

12. Material Storage:
The facility uses a variety of liquid and solid chemicals including: sodium hypochlorite, ferric sulfate, powdered activated carbon, hydrated lime, fluorosilicic acid, orthophosphate, and ammonium hydroxide. The powdered activated carbon and the hydrated lime are stored in silos on the plant grounds. The ferric sulfate and fluorosilicic acid are stored outdoors in bulk storage tanks within containment berms. The sodium hypochlorite and ammonium hydroxide are stored indoors in bulk storage tanks within containment berms. Orthophosphate is temporarily stored and fed from 55 gallon drums indoors due to its indoor tank leakage; a contract has been awarded to build an outdoor bulk storage tank and indoor day storage feed tanks with appropriate containment walls for orthophosphate.

Diesel fuel for the backup generator is stored outside in an above ground tank with a concrete berm. The facility's topography is such that dependent on where a leak occurred runoff would either flow to the lagoons (emptying into sanitary sewer) or to a drainage ditch that would eventually flow into Swift Creek downstream of the reservoir dam.

13. Ambient Water Quality Information:
During the 2012 and draft 2014 305(b)/303(d) Water Quality Integrated Reports, Swift Creek from the Swift Creek Reservoir dam downstream to Reedy Creek was assessed as a Category 5A water ("A Water Quality Standard is not attained. The water is impaired or threatened for one or more designated uses by a pollutant(s) and requires a TMDL (303d list).") The Aquatic Life Use is impaired due to dissolved oxygen (DO) exceedances. The Wildlife Use was fully supporting and the Recreation and Fish Consumption Uses were not assessed.

Swift Creek is located within the study area for the Appomattox River Basin Bacterial TMDL, which was approved by the EPA on 8/30/2004 and by the SWCB on 12/20/2005. The facility originally received an *E. coli* wasteload allocation of 1.05E+10 cfu/year. However, that was subsequently determined to be an error as the water treatment plant is not expected to be a source of additional fecal bacteria. The TMDL was modified on 2/2/2011 to remove the wasteload allocation.

This facility discharges directly to Swift Creek in the Chesapeake Bay watershed. The receiving stream has been addressed in the Chesapeake Bay TMDL, approved by EPA on December 29, 2010. The TMDL addresses dissolved oxygen (DO), chlorophyll a, and submerged aquatic vegetation (SAV) impairments in the main stem Chesapeake Bay and its tidal tributaries by establishing non-point source load allocations (LAs) and point-source waste load allocations (WLAs) for Total Nitrogen (TN), Total Phosphorus (TP) and Total Suspended Solids (TSS) to meet applicable Virginia Water Quality Standards contained in 9VAC25-260-185.

Implementation of the Chesapeake Bay TDML is currently accomplished in accordance with the Commonwealth of Virginia's Phase I Watershed Implementation Plan (WIP), approved by EPA on December 29, 2010. The approved WIP recognizes the "General VPDES Watershed Permit Regulation for Total Nitrogen and Total Phosphorus Discharges and Nutrient Trading in the Chesapeake Bay Watershed of Virginia" (9VAC25-820) as controlling the nutrient allocations for non-significant Chesapeake Bay dischargers. The approved WIP states that for non-significant Municipal and Industrial facilities, nutrient WLAs are to be consistent with Code of Virginia procedures, which set baseline WLAs to 2005 permitted design capacity nutrient load levels. In accordance with the WIP, TN and TP WLAs for non-significant facilities are considered aggregate allocations and will not be included in individual permits. The WIP also considers TSS WLAs for non-significant facilities to be aggregate allocations, but TSS limits are to be included in individual VPDES permits in conformance with the technology-based requirements of the Clean Water Act. However, the WIP recognizes that so long as the aggregated TSS permitted loads for all dischargers is less than the aggregated TSS load in the WIP, the individual permit will be consistent with the TMDL.

40 CFR 122.44(d)(1)(vii)(B) requires permits to be written with effluent limits necessary to meet water quality standards and to be consistent with the assumptions and requirements of applicable WLAs. The nutrient allocations are administered through the Watershed Nutrient General Permit; the TSS allocations are considered aggregated and facilities with technology-based TSS limits are considered to be in conformance with the TMDL. The Addison-Evans WTP was inadvertently excluded from the aggregated loads for non-significant wastewater dischargers in the Appomattox River tidal freshwater estuary (APPTF). However, this facility is classified as a Non-significant Chesapeake Bay discharger because it has an expected equivalent nutrient load, less than that of a 40,000 gpd municipal wastewater facility discharging to non-tidal freshwaters. This facility has not

made application for a new or expanded discharge since 2005. It is therefore covered by rule under the 9VAC25-820 regulation. In accordance with the WIP, TN and TP load limits are not included in this individual permit, but are consistent with the TMDL because the current nutrient loads are in conformance with the facility's 2005 permitted design capacity loads. This individual permit includes TSS limits of 30 mg/L that are in conformance with technology-based requirements and, in turn, are consistent with the Chesapeake Bay TMDL.

14. Antidegradation Review & Comments:

Tier: 1 X 2_____ 3_____

The State Water Control Board's Water Quality Standards includes an antidegradation policy (9VAC25-260-30). All state surface waters are provided one of three levels of antidegradation protection. For Tier 1 or existing use protection, existing uses of the water body and the water quality to protect these uses must be maintained. Tier 2 water bodies have water quality that is better than the water quality standards. Significant lowering of the water quality of Tier 2 waters is not allowed without an evaluation of the economic and social impacts. Tier 3 water bodies are exceptional waters and are so designated by regulatory amendment. The antidegradation policy prohibits new or expanded discharges into exceptional waters.

The antidegradation review begins with a Tier determination. Due to the withdrawals by the County from Swift Creek Reservoir, and to an agreement between the County and the landowners immediately adjacent to Swift Creek Reservoir, Swift Creek has the potential to go dry immediately downstream of the reservoir during periods of low flow. Due to the lack of release from the dam during low flow events, the stream is considered a Tier 1 water at the vicinity of the outfall.

15. Site Visit: Date 12/14/2015 Performed by: Brian Wrenn
Attachment B- Site Visit Report

16. Effluent Screening & Limitation Development:

Due to the fact that this facility, under normal operating procedures, does not discharge, there was no Discharge Monitoring Report (DMR) data available for the permit term. The facility has elected to certify that previous monitoring data (08/25/2010 application) is applicable to the discharge. Permit Attachment A -Water Quality Criteria Monitoring is typically required with the application submission for a facility with this flow (0.5 MGD). However, taking into consideration the absence of a discharge under normal circumstances, and previous permitting decisions, it was not compulsory with this application for reissuance. Special requirements for submission of Attachment A are addressed in Part I.B.9 of the permit.

The previous samples were taken directly from the sludge lagoon for the purposes of analysis for the permit application. The outfall discharges to a segment of Swift Creek that is often dry due to withdrawals from Swift Creek reservoir and ambient monitoring data was also not available.

Numeric permit limitation calculations utilize conservative low flow ambient conditions to represent circumstances in which the effluent has the greatest potential to impact the receiving stream. This facility must meet end-of-pipe limits as it discharges to a dry ditch under low flow conditions; therefore, stream information and effluent information is identical in MSTRANTI. In the absence of hardness data, the most conservative value of 25 mg/L $CaCO_3$ was used. The maximum average temperature value (29.7^{o}C) from Form 2C was assumed to be a reasonable approximation of the 90th percentile stream/effluent temperature. Likewise, the reported pH of 6.3 S.U.was used as a reasonable approximation of the 90th percentile and 10th percentile stream/effluent pH. Due to the end-of-pipe limits, a 0% mix was assumed. MSTRANTI was used to determine maximum wasteload allocations for each water quality parameter that maintain Water Quality Standards (WQS) in the receiving stream.

Effluent testing reported on EPA Form 2C consists of pollutants believed present in the facility's effluent. Measurable concentrations of the pollutants listed in Table II of this fact sheet were observed in the effluent. All other pollutants analyzed were less than the quantification level (QL) concentrations, or believed absent. Acceptable QLs were used in these analyses. Pollutants reported in the 2010 application for which there are applicable Water Quality Standards were evaluated for reasonable potential using STATS.exe. The results of these analyses are included in Attachment E (Stats.exe results). A limit for TRC was required; no limit for ammonia was necessary.

Table I. Basis for Effluent Limitations:

PARAMETER	BASIS
Total Suspended Solids (TSS)	Permit Writer Judgment
pH	State Water Quality Standards
Total Residual Chlorine (TRC)	State Water Quality Standards

a. Permit Writer Judgment (PWJ)

TSS: TSS limits of 30 mg/L (monthly average) and 60 mg/L (daily maximum) were utilized in accordance with the Guidance Memorandum (GM) 14-2003, Section IN-5, Part A.5, "Water Treatment Plants," and consistent with the previous permit cycle. As no federal effluent guidelines currently exist for discharges from water treatment plants, the limitations are based on Permit Writer Judgment.

b. Water Quality Standards/Water Quality-Based

pH: 9VAC25-260-50 of the Virginia Water Quality Standards outlines numerical criteria for pH in Class III waters between 6.0 SU and 9.0 SU.

Total Residual Chlorine (TRC): Although application data indicates that TRC concentrations in the effluent were reported as a concentration of 0.01 mg/L, chlorine is a toxic pollutant purposefully introduced into the wastewater. Per GM14-2003, a chlorine limitation was forced using a datum of 20,000 µg/L. The resulting limitation (16 µg/L) is equivalent to the 2011 permit limitation.

Effluent testing reported on EPA Form 2C consists of the following required parameters: Biological oxygen demand (BOD), chemical oxygen demand (COD), total organic carbon (TOC), total suspended solids (TSS), ammonia, flow, temperature, and pH. Supplementary parameters that were believed present in the effluent were also reported in Part B. The effluent data is shown in Table II.

Table II. Effluent data reported in the 2010 permit application (Form 2C).

Pollutant	**Value Reported**
BOD (mg/L)*	<3
COD (mg/L)*	28
TOC (mg/L)*	11
TSS (mg/L)	80
Ammonia (as N) (mg/L)	0.45
pH (s.u.)	6.3
TRC (mg/L)	0.01
Color (Color Un)**	80
Fecal Coliform (MPN/100mL)	50
Fluoride (mg/L)	0.94
Nitrate-Nitrite (as N) (mg/L)	<0.1
Total Organic Nitrogen (as N) (TON) (mg/L)	0.59
TP (mg/L)	0.048
Sulfate (as SO_4) (mg/L)	38

Aluminum, Total (mg/L)	0.046
Iron, Total (mg/L)	4.3
Manganese, Total (mg/L)	0.68

*BOD, COD, and TOC are oxygen demanding parameters. Based on PWJ, these parameters do not exert a notable oxygen demand on the receiving waters and are therefore not limited. Federal secondary treatment guideline limits for municipal wastewater plants for BOD_5 are 30 mg/L (monthly average) and 45 mg/L (7-day average). Therefore the reported BOD value of <3 mg/L for this effluent does not elicit water quality concerns.

**Color is a cosmetic and aesthetic parameter and does not represent a human health concern. The EPA's National Secondary Drinking Water Regulations state a standard of 15 color units for drinking water, although these are non-mandatory standards, created as guidelines to assists public water systems in managing their drinking water for aesthetic parameters. Water with a color rating of 5 color units means the water color is equal to the intensity of distilled water containing 5 milligrams of platinum as potassium chloroplatinate per liter. The color of the effluent in this case may be due to a variety of sources. Anthracite filters are used at the Water Treatment Plant and may contribute a dark color to the effluent during the backwashing process. Similarly, the use of ferric sulfate and hydrated lime, among other chemical additions, throughout the treatment process likely contribute to the color of effluent in the lagoon.

Ambient water quality data for the Appomattox River Station 2-APP001.53 near the City of Hopewell was examined to determine ambient water color. The average color was 78 color units, but values as high as 233 color units were recorded for the river. The color of the effluent is a byproduct of the treatment process and does not pose a human health concern and is not uncommonly high as compared to ambient color conditions in the Appomattox River. As such, it is PWJ that color does not require further evaluation.

All pollutant concentration data reported in the application were evaluated in regard to compliance with Virginia's Water Quality Standards (aquatic life and/or human health). There are no acute or chronic aquatic life criteria for fluoride, Nitrate-Nitrite, TON, TP, sulfate, aluminum, iron or manganese, therefore further evaluation with regard to Water Quality Standards was not necessary for these parameters. Fecal coliform limits are not used except for discharges into shellfish waters (per GM14-2003); the limit used for shellfish waters is 200 N/100ml. The value reported at this facility is well below this limit; therefore, it is PWJ that the facility does not present a bacteriological water quality concern.

Swift Creek was included in the Appomattox River Basin Bacterial Total Maximum Daily Load (TMDL), which was approved by the EPA on 8/30/2004 and by the State Water Control Board on 12/20/2005. The facility was addressed in the TMDL and assigned a bacterial wasteload allocation; however, the water treatment plant is not expected to contribute additional fecal coliform bacteria to background influent concentrations. A modification to remove the facility from the TMDL was initiated in November 2010. The modification was approved on February 2, 2011 and a bacteria limit is therefore not required.

Table III. Human Health Evaluation

Parameter	**Expected Value (µg/L)**	**HH (PWS) Standard (µg/L)**
Iron	4,300	300
Manganese	680	50
Sulfate	38,000	250,000
Nitrate (as N)	<100 (Nitrate-Nitrite as N)	10,000

Table III is used for comparative purposes to examine Human Health standards for a public water supply (PWS). The receiving waters for this facility are not a PWS therefore further evaluation of the parameters listed in Table III is not needed as human health standards do not apply.

17. Antibacksliding Statement: All limits are as stringent as the previous permit.

18. Compliance Schedules: There are no new or more stringent permit limitations proposed in this reissuance; consequently, a compliance schedule is not necessary.

19. Special Conditions:

B.1 O&M Manual Requirement
Rationale: Required by Code of Virginia § 62.1-44.16; VPDES Permit Regulation, 9VAC25-31-190.E, and 40CFR 122.41(e). These require proper operation and maintenance of the permitted facility. Compliance with an approved O&M manual ensures this.

B.2 Materials Handling/Storage
Rationale: 9VAC25-31-50.A prohibits the discharge of any wastes into State waters unless authorized by permit. Code of Virginia §62.1-44.16 and §62.1-44.17 authorize the Board to regulate the discharge of industrial waste or other waste.

B.3 Notification Levels
Rationale: Required by VPDES Permit Regulation, 9VAC25-31-200.A for all manufacturing, commercial, mining, and silvicultural dischargers.

B.4 Compliance Reporting
Rationale: Authorized by VPDES Permit Regulation, 9VAC25-31-190.J.4 and 220.I. This condition is necessary when pollutants are monitored by the permittee and a maximum level of quantification and/or a specific analytical method is required in order to assess compliance with a permit limit or to compare effluent quality with a numeric criterion. The condition also establishes protocols for calculation of reported values.

B.5 Ground Water Monitoring
Rationale: State Water Control Law § 62.1-44.21 authorizes the Board to request information needed to determine the discharge's impact on State waters. Ground water monitoring for parameters of concern will indicate whether possible lagoon seepage is resulting in violations of the State Water Control Board's Ground Water Standards.

Groundwater data from February 2012 to August 2015 were analyzed to evaluate potential impacts of the settling lagoons on groundwater. See **Attachment H** - Groundwater Report and Evaluation for a detailed discussion.

As required by the 2011 permit, a new upgradient well, MW-4, was installed along with another downgradient well, MW-5. MW-3, the former upgradient well, was converted to a downgradient well. Significant differences in the downgradient wells above the upgradient well with increasing concentration trends were determined for ammonia, chloride, sulfate, total dissolved solids, and TOC. Furthermore, pH in the downgradient wells was determined to be significantly different from upgradient well. Therefore, a corrective action plan is required in this permit.

B.6 TMDL and Nutrient Reopener
Rationale: Section 303(d) of the Clean Water Act requires that Total Maximum Daily Loads (TMDLs) be developed for streams listed as impaired. This special condition is to allow the permit to be reopened if necessary to bring it into compliance with any applicable TMDL approved for the receiving stream. The reopener recognizes that, according to Section 402(o)(1) of the Clean Water Act, limits and/or conditions may

be either more or less stringent than those contained in this permit. Specifically, they can be relaxed if they are the result of a TMDL, basin plan, or other wasteload allocation prepared under section 303 of the Act. This reopener is included in all VPDES permits. 9VAC 25-49-70 A authorizes DEQ to include technology-based annual concentration limits in the permits of facilities that have installed nutrient control equipment, whether by new construction expansion or upgrade. 9VAC 25-31-390 A authorizes DEQ to modify VPDES permits to promulgate amended water quality standards.

B.7 Closure Plan
Rationale: Code of Virginia § 62.1-44.19 of the State Water Control Law. This condition establishes the requirement to submit a closure plan for the wastewater treatment facility if the treatment facility is being replaced or is expected to close.

B.8 Industrial Concept Engineering Report (CER)
Rationale: §62.1-44.16 of the Code of Virginia requires industrial facilities to obtain DEQ approval for proposed discharges of industrial wastewater. A CER means a document setting forth preliminary concepts or basic information for the design of industrial wastewater treatment facilities and the supporting calculations for sizing the treatment operations.

B.9 Water Quality Criteria Monitoring
Rationale: State Water Control Law §62.1-44.21 authorizes the Board to request information needed to determine the discharge's impact on State waters. States are required to review data on discharges to identify actual or potential toxicity problems, or the attainment of water quality goals, according to 40CFR Part 131, Water Quality Standards, subpart 131.11. To ensure that water quality criteria are maintained, the permittee is required to analyze the facility's effluent for the substances noted in Attachment A of this VPDES permit.

C. WHOLE EFFLUENT TOXICITY TESTING
Rationale: VPDES Permit Regulations, 9VAC25-31-210 and 220.I, require monitoring in the permit to provide for and assure compliance with all applicable requirements of the State Water Control Law and the Clean Water Act. Monitoring will begin concurrent with commencement of the discharge to Swift Creek.

PART II.CONDITIONS APPLICABLE TO ALL PERMITS
Rationale: VPDES Permit Regulation, 9VAC25-31-190 requires all VPDES permits to contain or specifically cite the conditions listed.

20. NPDES Permit Rating Work Sheet: Total Score 75
See **Attachment F**.

21. Changes to Permit

Changes to Cover Page:

From	To	Reason
Facility Name: Addison/Evans Water Production and Laboratory Facility (Formerly Swift Creek Water Treatment Plant)	Facility Name: Addison/Evans Water Production and Laboratory	Changed to match official name in CEDS.

Parameter Changed	Discharge Limitations								Monitoring Frequency		Reason for Change
	Monthly Average		Weekly Average		Min		Max				
	From	To	From	To	From	To	From	To	From	To	
TP	--	NL	--	NA	--	NA	--	NA	--	1 per Year	This monitoring is included in accordance with GM14-2011, which addresses Nutrient Monitoring for "Nonsignificant" Discharges to the Chesapeake Bay Watershed. Nonsignificant dischargers are subject to aggregate wasteload allocation for Total Nitrogen (TN) and Total Phosphorus (TP) and Sediments under the Total Maximum Daily Load (TMDL) for Chesapeake Bay. Monitoring of TN and TP is required in order to verify the aggregate loads. TN is the sum of TKN and Nitrate + Nitrite. Concurrent sampling of TKN and Nitrate+ Nitrite should be used in calculating TN.
TKN	--	NL	--	NA	--	NA	--	NA	--	1 per Year	
Nitrate + Nitrite	--	NL	--	NA	--	NA	--	NA	--	1 per Year	
TN	--	NL	--	NA	--	NA	--	NA	--	1 per Year	

Changes to Part I.B and C:

From	To	Reason
I.B.1 Operation and Maintenance Manual Requirement	I.B.1. Operation and Maintenance Manual Requirement	Language revised in accordance with GM14-2003.
I.B.4 Compliance Reporting and Quantification Levels	I.B.4. Compliance Reporting	Language revised in accordance with GM14-2003.
I.B.5 Groundwater Monitoring	I.B.5. Groundwater Monitoring	Language updated to reflect the need for a corrective action plan based on data review. (Per GM 98-2010 and GM14-2003).
I.B.6 TMDL Reopener	I.B.6 Total Maximum Daily Load (TMDL) and Nutrient Reopener	Additional nutrient reopener language added to existing TMDL reopener language in accordance with GM07-2008 and PRO Regional Office protocol.
I.B.7 Facility Closure Plan	I.B.7. Closure Plan	Language revised in accordance with GM14-2003.
I.B.8 CER Permit Special Condition	I.B.8 Industrial Concept Engineering Report (CER)	Language revised in accordance with GM14-2003.
I.C. Whole Effluent Toxicity (WET) Program	I.C. Whole Effluent Toxicity (WET) Program	Language revised per January 19, 2016 D. DeBiasi guidance.

Changes to Part II

From	To	Reason
Part II. Conditions Applicable To All	Part II. Conditions Applicable To All	Language revised in accordance with GM14-2003.

VPDES Permits	VPDES Permits	

22. Variances/Alternate Limits or Conditions: None

23. Public Notice Information required by 9VAC25-31-280.B:

Comment period: Publishing Newspaper: *Richmond Times-Dispatch*
Publishing Dates: March 23, 2016 and March 30, 2016
Start Date: March 23, 2016 End Date: April 25, 2016

All pertinent information is on file and may be inspected or copied by contacting Brian Wrenn at:

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HOW TO COMMENT AND/OR REQUEST A PUBLIC HEARING: DEQ accepts comments and requests for public hearing by e-mail, fax or postal mail. All comments and requests must be in writing and be received by DEQ during the comment period. Submittals must include the names, mailing addresses and telephone numbers of the commenter/requester and of all persons represented by the commenter/requester. A request for public hearing must also include: 1) The reason why a public hearing is requested. 2) A brief, informal statement regarding the nature and extent of the interest of the requester or of those represented by the requestor, including how and to what extent such interest would be directly and adversely affected by the permit. 3) Specific references, where possible, to terms and conditions of the permit with suggested revisions. A public hearing may be held, including another comment period, if public response is significant, based on individual requests for a public hearing, and there are substantial, disputed issues relevant to the permit. The public may review the draft permit and application at the DEQ office named above by appointment or may request copies of the documents from the contact person listed above.

24. Additional Comments:

a. Previous Board Action: None

b. Staff Comments:

(1) Planning Conformance Statement: The discharge is in conformance with the existing planning documents for the area.

(2) Whole Effluent Toxicity (WET) testing: WET testing was not required as part of the application for the facility as it has not to date ever discharged. Upon commencement of a discharge the facility is required per Part I.C. of the permit to submit WET test results. The WET test special condition (Part I.C.) is carried forward per the active permit, however the special condition language has been updated per Central Office guidance. See **Attachment I** for the WET Testing Review Memo and WETLIM10.

(3) Controversial Permit Assessment: This permit is not expected to be controversial.

(4) Fees: Permit maintenance fees are up to date, last paid on September 17, 2015.

(5) eDMR Participation: The facility has been an eDMR participant since June 17, 2011.

(6) Virginia Environmental Excellence Program (VEEP) Participation: The permittee is not a VEEP member.

(7) Reduced Effluent Monitoring: Reduced monitoring has not been applied for this facility. In accordance with GM14-2003 reduced monitoring is not appropriate for this facility due to the discontinuous nature of the discharge.

(8) VPDES Industrial Storm Water General permit VAR05: This facility is not subject to coverage under the VPDES Industrial Storm Water General permit VAR05 (authorized by 9VAC25-151).

(9) General VPDES Watershed Permit Regulation for Total Nitrogen and Total Phosphorus Discharges and Nutrient Trading in the Chesapeake Bay Watershed in Virginia: This facility is not subject to 9VAC25-820-10 et seq. General VPDES Watershed Permit Regulation for Total Nitrogen and Total Phosphorus Discharges and Nutrient Trading in the Chesapeake Bay Watershed in Virginia. This facility is not considered a significant discharger of nutrients to the Chesapeake Bay per the definition of "significant discharger" established in 9 VAC 25-720; the facility does not discharge a nutrient loading equivalent to a 500,000 gallon per day (gpd) municipal facility. TN and TP concentrations at municipal facilities considered representative of secondary treatment are 18.7 mg/L and 2.5 mg/L. These numbers correspond with a loading of 28,462 lbs/year TN and 3,805 lbs/year TP for a 500,000 gallon per day (significant) municipal discharger.

Although this facility is permitted for a 500,000 gpd, it does not discharge a nutrient load equivalent to the above-referenced numbers. A TP concentration value for the effluent taken from the reissuance application submitted in 2004 of 0.008 mg/L would result in an annual TP load of 12 lbs/year at the 500,000 gpd permitted design capacity. TN is not traditionally monitored or reported on the application for this facility therefore an estimate of TN loading is not possible; however, considering the 2004 reported value for Nitrate-Nitrite (as N) of less than 0.01 mg/L in the effluent, it is reasonable to conclude that the TN load of this facility does not correspond to that of a significant discharger as defined above. As the facility has not proposed an expansion or upgrade to the wastewater treatment facilities at this time, further evaluation of nutrients is not necessary.

(10) Financial Assurance: Financial assurance does not apply to this facility because it is a publicly owned treatment works.

(11) Permit Expiration Date: The 2016 permit expiration date was shortened to occur at the end of the month prior to the 5-year anniversary of the permit. This is done to begin each future permit cycle at the start of a monitoring period.

c. Other Agency Comments:

(1) EPA Comments: EPA has categorically waived the right to comment on draft permits for minor, municipal facilities that do not include limits to comply with a TMDL other than those for bacteria TMDLs.

(2) VDH Comments: By letter dated July 6, 2015 the Virginia Department of Health stated that they had no objections to the permit reissuance. See **Attachment G**.

(3) Threatened and Endangered Species Coordination: As required by the 2007 Memorandum of Agreement (MOU) between VDEQ, VDGIF (Virginia Department of Game and Inland Fisheries), VDCR (Virginia Department of Conservation and Recreation), and USFWS (United States Fish and Wildlife Service), a threatened and endangered species screening was conducted for this permit reissuance. The T&E review was performed in accordance with GM 07-2007. Comments from DCR were received December 3, 2015. Comments were requested from DGIF on December 7, 2015. No comments were received. See **Attachment G** comments from the resource agencies.

d. Owner Comments: Owner comments were received on March 1, 2016. The owner concurred with the draft documents on March 17, 2016. Owner comments and DEQ responses can be found in **Attachment K**.

e. Local Government Notification of Public Notice: Sent March 22, 2016 to the following individuals: Steve A. Elswick, Chairman of the Chesterfield County Board of Supervisors; Barbara Jacocks, Director of Planning of the Richmond Regional Planning District Commission; and James J.L Stegmaier, County Administrator of Chesterfield County.

f. Public Notice Comments: None.

25. Attachments:

Attachment A: Flow Frequency Analysis
Attachment B: Site Visit Report
Attachment C: Plant Flow Diagram
Attachment D: Topographic Map
Attachment E: Application data and Certified Effluent Data (08/25/2010)
Attachment F: Data Source Table for MSTRANTI, MSTRANTI, STATS Results
Attachment G: Threatened and Endangered Species and Other Agency Coordination
Attachment H: Groundwater Report and Evaluation
Attachment I: WET Testing Review Memo, WETLIM10
Attachment J: NPDES Permit Rating Worksheet
Attachment K: Owner Comments and DEQ Responses